Nocebo effects in fibromyalgia pain progression

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Part 1: Primary: Patients who are more susceptible to nocebo effects at baseline will have greater clinical pain progression from baseline to one-year follow-up. Secondary 1: Patients who are more resilient to extinction will have greater clinical...

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON24049

Bron
Nationaal Trial Register

Verkorte titel
N/A

Aandoening

Patients with fibromyalgia (N=103) and matched healthy control participants (N=34)

Ondersteuning

Primaire sponsor: Leiden University
Overige ondersteuning: Netherlands Organization for Scientific Research (NWO) - Vici grant

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Nocebo effects will be calculated by taking the mean difference of pain scores (0-10 NRS) in

the experimental and control trials of each testing phase. Nocebo effects will be calculated separately for conditioning and extinction parts. The recovery from nocebo effects, i.e., reduction of nocebo effects, will be calculated by taking the difference in nocebo effects after conditioning and after extinction.

Part 1: The role of nocebo effects (primary predictor) in the changes in primary outcome measure (clinical pain levels, i.e., pain severity questions from Brief Pain Inventory) will be assessed in patients from baseline to one-year follow-up.

Part 2: To get a more in-depth understanding of group differences in learning nocebo manipulations, the average pain scores in experimental and control trials from the testing phase of conditioning will be compared between groups, instead of a direct comparison of nocebo effects.

Part 3: Within-group stability of nocebo effects will be assessed by comparing per group the average pain scores in experimental and control trials from the testing phases (conditioning) in baseline and one-month follow-up.

Toelichting onderzoek

Achtergrond van het onderzoek

Somatic symptoms, such as pain, can progress or become chronic due to sensitization processes. Nocebo effects, i.e., adverse treatment outcomes not attributable to active treatment components, could be playing a role in symptom progression. In this 3-part study, we examine whether: -susceptibility to nocebo effects predicts future pain progression in patients with chronic widespread pain, i.e. fibromyalgia (part 1), - nocebo-related learning processes differ between patients and healthy controls (part 2), and - nocebo-related learning processes are stable after one-month follow-up (part 3).
In a lab procedure, participants' susceptibility to nocebo effects and their recovery therefrom will be measured with conditioning and extinction paradigms, respectively, combined with verbal suggestions. A sham Transcutaneous Electrical Nerve Stimulation (TENS) device will serve as the "placebo device" such that participants will be told when the device is activated pain sensitivity increases. After the baseline lab measurements, patients' clinical pain levels will be followed-up at one-year to assess the role of nocebo effects in pain progression. Next to this, patients will also fill in a digital diary app (Experience Sampling Method; ESM) at baseline and one-year follow-up to assess possible changes in daily pain fluctuations (part 1). Furthermore, the baseline lab measurements will be compared between patients and healthy controls (part 2) and the within-group stability thereof will be investigated at one-month follow-up (part 3).

Doel van het onderzoek

Part 1:

Primary: Patients who are more susceptible to nocebo effects at baseline will have greater clinical pain progression from baseline to one-year follow-up.
Secondary 1: Patients who are more resilient to extinction will have greater clinical pain progression from baseline to one-year follow-up.
Secondary 2: Nocebo-related learning processes (conditioning and extinction) predict the progression of secondary outcome measures (fibromyalgia disability and daily pain fluctuations) from baseline to one-year follow-up.

Part 2:
Primary: Compared to healthy controls, patients will show higher susceptibility to nocebo effects.
Secondary: Compared to healthy controls, patients will be more resilient to extinction.

Part 3:
Because the stability of nocebo effects has not been examined before, the research questions from this part (within- and between-group stability of susceptibility to nocebo effects and extinction) will be explored without specific hypotheses.

Onderzoeksopzet

All participants will fill out baseline questionnaires to assess demographic, psychological, and clinical characteristics. All patients and healthy controls, matched to the first 34 patients, will participate in the baseline lab session. Next, the first 34 patients and matched healthy controls will be invited for a follow-up lab session at one-month. Only patients will be additionally contacted at one-year to follow-up up on clinical measures (clinical pain and fibromyalgia disability). Moreover, all patients will be asked to fill out a digital diary app on their phone (ESM) for 3 weeks and 3 times a day at baseline and one-year follow-up.

Onderzoeksproduct en/of interventie

In a lab procedure, nocebo effects will be induced with the associative learning mechanism of classical conditioning combined with verbal suggestions. In the learning phase of the conditioning paradigm, announcing the activation of a placebo device (a sham TENS) will be paired with a higher intensity pressure pain applied to the thumb nail than the control trials where it is announced that the placebo device is de-activated. In the testing phase, participants will receive the same intensity of pressure pain regardless of the presumed (de)activation of the placebo device. To recover from nocebo effects, an extinction procedure will take place whereby in both learning and testing phases participants will receive the same intensity of pressure pain regardless of placebo device (de)activation. Pain intensity will be rated after each trial on a 0-10 Numeric Rating Scale (NRS). At one-month follow-up, the same lab procedure will be repeated, except it will begin with an additional testing phase to assess the amount of remaining nocebo effects from the baseline session.
Moreover, questionnaires on demographic (e.g. age), psychological (e.g. pain catastrophizing, optimism), and clinical characteristics (e.g., baseline pain levels) will be assessed in all participants. Additionally, in patients a digital diary app (ESM) will be used for momentary assessments of daily pain levels and psychological states.

Contactpersonen

Publiek

Leiden University
Andrea Evers

+31 71 527 6891

Wetenschappelijk

Leiden University
Andrea Evers

+31 71 527 6891

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Participants must meet all of the following criteria:
• Female
• Age18-65
• Fluent in Dutch language (written and spoken)
• Able to give informed consent

Additionally, for patients:
• Fibromyalgia diagnosis by a rheumatologist, as reported by the patient and as verified by provision of the date, location, and provider of the diagnosis.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Participants will be excluded for the following criteria:
• Pregnancy or breastfeeding
• Color blindness
• Injuries/open wounds on the non-dominant hand or arm on the day of laboratory session
• Carrying a pacemaker/implanted pumps
• Having implanted metals on the non-dominant hand or arm

• Refusal/inability to remove possible artificial nails or nail polish covering the thumbnail

Specific for patients, additionally:
• A medical diagnosis other than fibromyalgia explaining the chronic pain symptoms
• Severe physical or mental co-morbidities that are not related to fibromyalgia symptoms (e.g., DSM-V diagnosis of psychosis, suicidal ideation, addiction)
• Use of painkillers different than usual dose of treatment on the day of experimentation

Specific for healthy controls, additionally:
• Chronic pain complaints ≥3 months in the past or present or a diagnosis of fibromyalgia
• Current pain
• Severe physical or psychiatric co-morbidities that may interfere with the study protocol (e.g., DSM-V diagnosis)
• Use of painkillers within 24 hours before the day of experimentation

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Anders
Toewijzing:	N.v.t. / één studie arm
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	05-12-2019
Aantal proefpersonen:	137
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Toelichting
N/A

Ethische beoordeling

Positief advies

Datum:	17-12-2019
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL8244
Ander register	METC Leiden-Den Haag-Delft (Leiden) : P18.227, NL67541.058.18

Resultaten

Samenvatting resultaten
N/A